

ABSTRACT OF THE DISCLOSURE

Using medical three-dimensional image data, at least one of a volume-rendering image, a flat reformatted image on an arbitrary section, a curved reformatted image, and an MIP (maximum value projection) image is prepared as a reference image. Vessel center lines are extracted from this reference image, and at least one of a vessel stretched image based on the center line and a perpendicular sectional image substantially perpendicular to the center line is prepared. The shape of vessels is analyzed on the basis of the prepared image, and the prepared stretched image and/or the perpendicular sectional image is compared with the reference image, and the result is displayed together with the images. Display of the reference image with the stretched image or the perpendicular sectional image is made conjunctive. Correction of the center line by the operator and automatic correction of the image resulting from the correction are also possible.